

**Notice of Allowability**

**Application No.**

09/771,045

**Examiner**

Medina A Ibrahim

**Applicant(s)**

DUVICK ET AL.

**Art Unit**

1638

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 11/11/2003.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.
5. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| <input type="checkbox"/> Notice of References Cited (PTO-892)  | <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)         |
| <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | <input checked="" type="checkbox"/> Examiner's Amendment/Comment                 |
| <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <input type="checkbox"/> Examiner's Statement of Reasons for Allowance           |
|  | <input type="checkbox"/> Other   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Lila Akrad on 11/26/03.

The application has been amended as follows:

In The Specification:

The continuing data on page 1, second paragraph, of the specification has been replaced with the following:

----This application is a continuation of US application 09/352, 159, filed 07/12/1999, now US PAT 6, 211, 434, which claims benefit to of 60/135, 391, filed 05/21/1999 and 60/092, 936, filed 07/15/1998. This application is also a continuation of 09/352, 168, filed 07/12/1999, now US PAT 6, 211, 435, all of which are hereby incorporated by reference. ----

In The Abstract

The abstract on page 77 has been replaced with the following:

----The present invention provides polynucleotides and related polypeptides of the enzyme APAO isolated from *Exophiala spinifera* and *Rhinocycladiella atrovirens*.

Additionally, the polynucleotides encoding for the APAO enzyme can be used to transform plant cells normally susceptible to Fusarium. Plants can be regenerated from the transformed plant cells-----.

In The Claims:

Claim 1 (Currently amended). An isolated polynucleotide [comprising a polynucleotide] encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide having [comprising] at least 90% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35;
- b) a polynucleotide having [comprising] at least 95% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35; and
- c) a polynucleotide complementary to the [a] polynucleotide of a) or b).

Claim 2 (Currently amended). A recombinant expression comprising an isolated [a] polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide having [comprising] at least 90% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35;
- b) a polynucleotide having [comprising] at least 95% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35; and
- c) a polynucleotide complementary to the [a] polynucleotide of a) or b).

Claim 3. (Currently amended). A vector comprising a recombinant expression comprising an isolated [a] polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide having [comprising] at least 90% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35;

b) a polynucleotide having [comprising] at least 95% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35; and

c) a polynucleotide complementary to the [a] polynucleotide of a) or b).

Claim 4. (Currently amended). A host cell comprising a recombinant expression comprising an isolated [a] polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

a) a polynucleotide having [comprising] at least 90% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35;

b) a polynucleotide having [comprising] at least 95% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35; and

c) a polynucleotide complementary to the [a] polynucleotide of a) or b).

Claim 6 (Currently amended). The host cell of Claim 5, wherein the plant cell is from a plant selected from the group consisting of maize, sorghum, wheat, tomato, soybean, alfalfa, sunflower, canola cotton, and rice.

Claim 7 (Currently amended). A transformed plant comprising an isolated [a] polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide having [comprising] at least 90% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35;
- b) a polynucleotide having [comprising] at least 95% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35; and
- c) a polynucleotide complementary to the [a] polynucleotide of a) or b).

Claim 8 (Currently amended). A plant seed comprising an isolated [a] polynucleotide encoding a protein having fumonisin degrading activity, said polynucleotide selected from the group consisting of:

- a) a polynucleotide having [comprising] at least 90% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35;
- b) a polynucleotide having [comprising] at least 95% sequence identity to the [a] polynucleotide as set forth in SEQ ID NO:35; and
- c) a polynucleotide complementary to the [a] polynucleotide of a) or b).

Art Unit: 1638

Papers related to this application may be submitted to Technology Sector 1 by facsimile transmission. Papers should be faxed to Crystal Mall 1, Art Unit 1638, using fax number (703) 308-4242. All Technology Sector 1 fax machines are available to receive transmission 24 hrs/day, 7 days/wk. Please note that the faxing of such papers must conform with the Notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Medina A. Ibrahim whose telephone number is (703) 306-5822. The Examiner can normally be reached Monday-Thursday from 8:30AM to 5:30PM and every other Friday from 9:00AM to 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Amy Nelson, can be reached at (703) 306-3218.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0196.

11/26/03

Mai

A handwritten signature in cursive script, appearing to read "Amy Nelson".

AMY J. NELSON, PH.D  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600